Evidence-Based Strategies to Foster Student Agency

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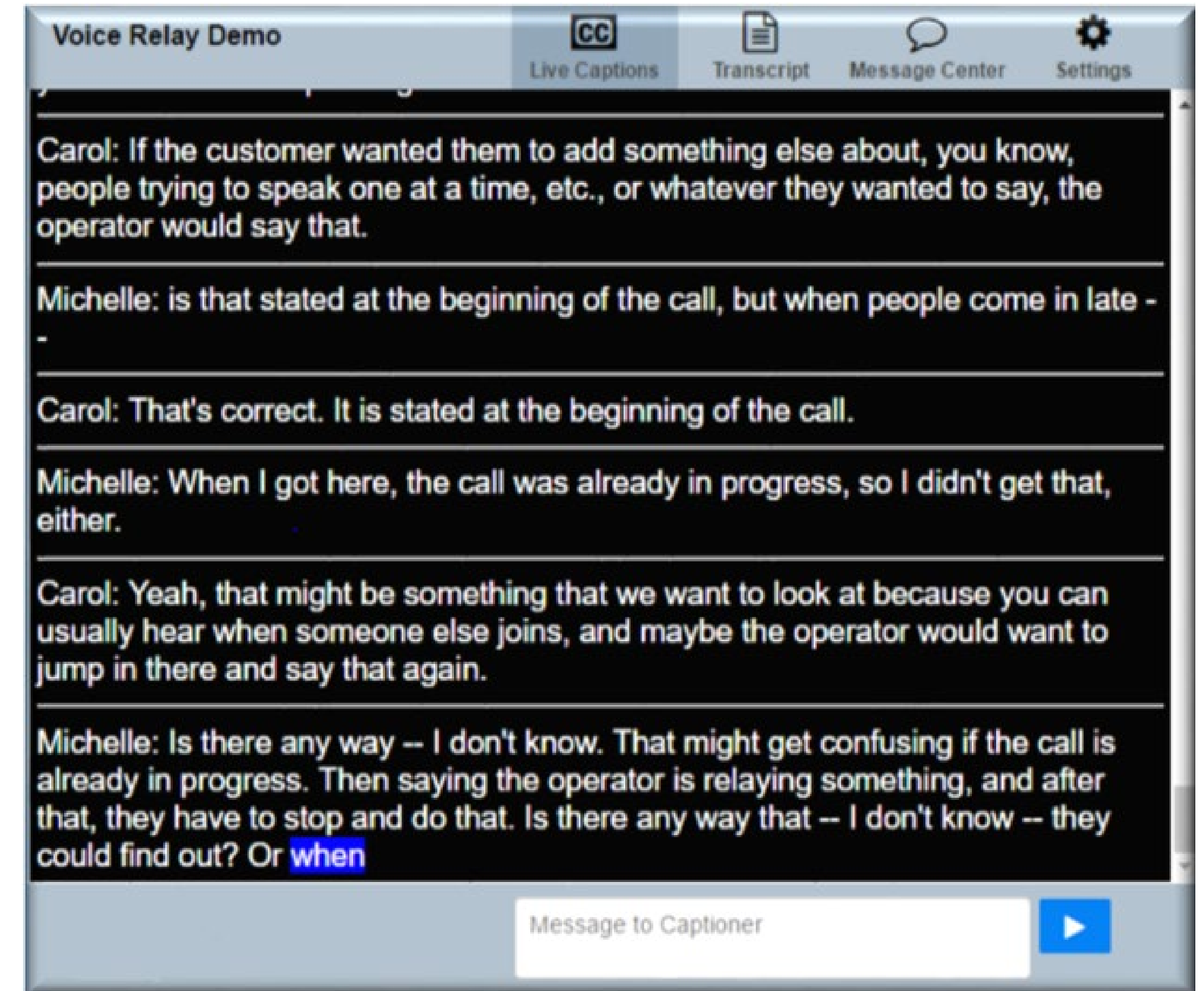
Q & A

To reduce background noise, we have muted all participants. Although chat has been disabled, you are welcome to communicate by using the Q & A box.

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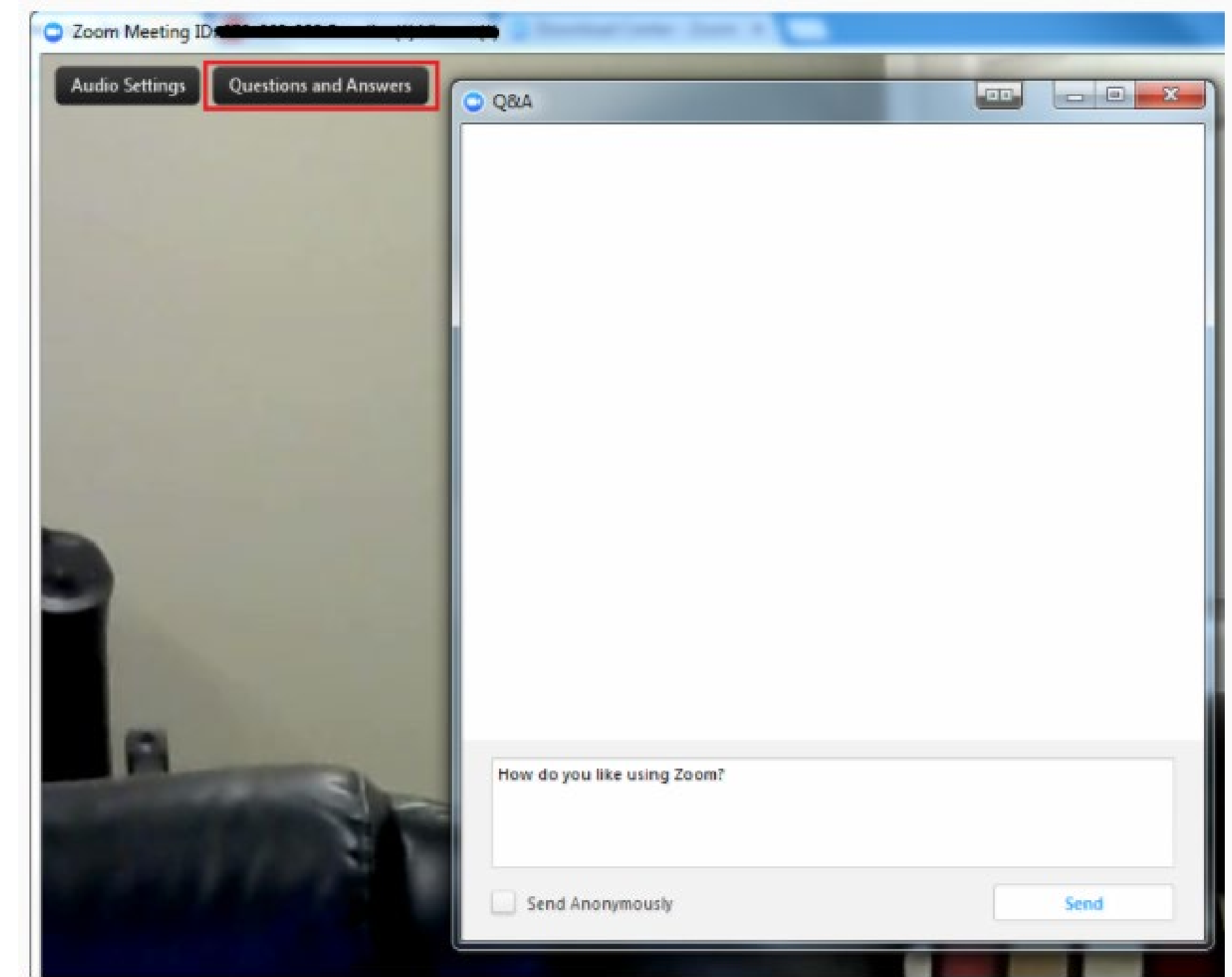
REL Central – Who We Are

The Regional Educational Laboratory (REL) Central at Marzano Research serves the applied education research needs of Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming.

REL Central – North Dakota Innovative Schools Research Partnership

An alliance united by goals to identify and support the implementation of promising innovative strategies in North Dakota.

Area of Focus

What approaches can be used to evaluate innovative education proposals and programs?

Interpreting Research on Student Use of Flexible Time

Meet Our Presenters

- David Yanoski, REL Central

- Marc Brodersen, REL Central

- Jeanette Joyce, REL Central

- Suzanne E. Hiller, Hood College, Maryland

- Tom Schmidt, Bismarck Public Schools, North Dakota

Goals

- To share evidence regarding the importance of student agency in supporting academic growth and achievement.

- To review findings from the REL Central report *How Legacy High School Students Use Their Flexible Time*.

- To identify lessons learned from Legacy High School's efforts to develop student agency and personalize student learning through an innovative flexible-time system.

- To share evidence-based strategies to develop student agency.

Why is student agency important?

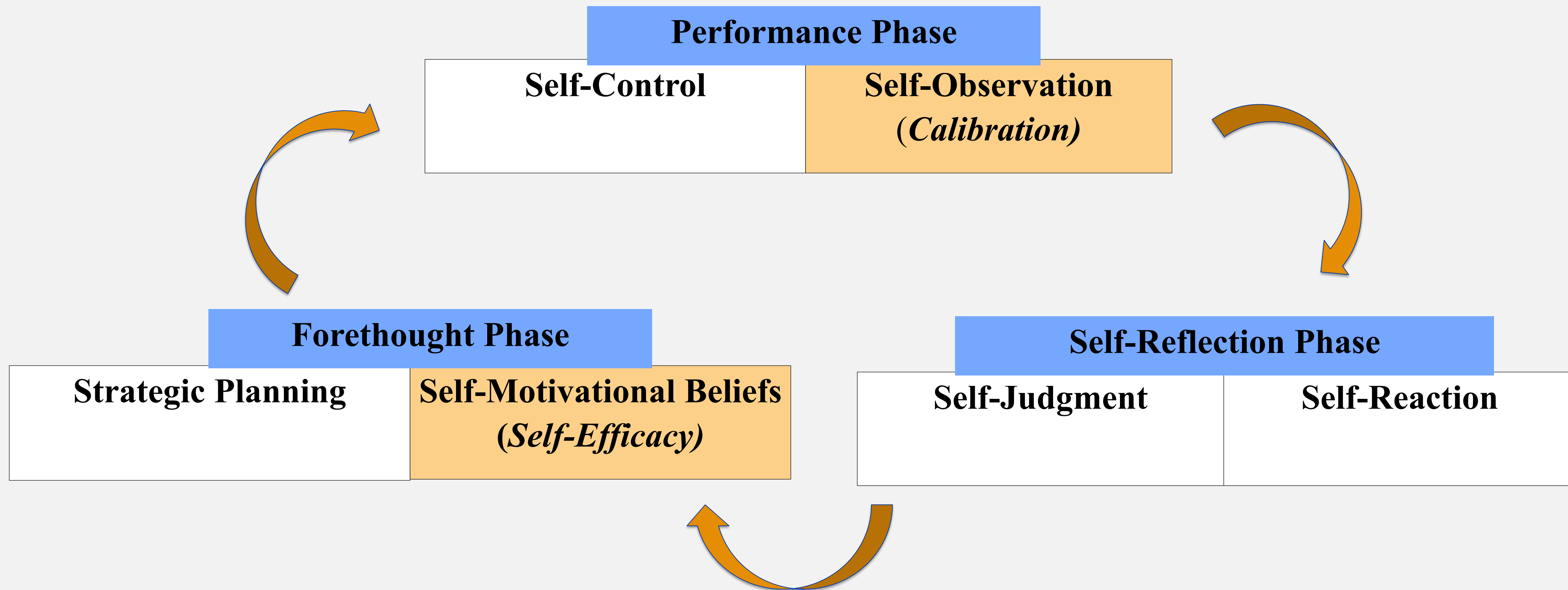Teacher A: *How do I encourage dialogue and collaboration in a bimodal classroom?*

It's not about the pieces, but how they work together. *-Bliss Foster*

Teacher B: *How do I provide individual support to meet the needs of all my students?*

Teacher C: *How can I address student needs and motivate both high and low achievers?*

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What is student agency? What is the role of self-regulation in building student agency?

3. *The Cyclical Self-Regulatory Feedback Loop Model* describes how to develop student agency through self-regulation.[1]

Performance Phase

Self-Control	Self-Observation *(Calibration)*

Forethought Phase

Strategic Planning	Self-Motivational Beliefs *(Self-Efficacy)*

Self-Reflection Phase

Self-Judgment	Self-Reaction

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Capitalize on Student Agency With Self-Regulation

Monitoring Performance

Guiding Question	Student Response
What have I accomplished?	
What parts of the project need improvement?	
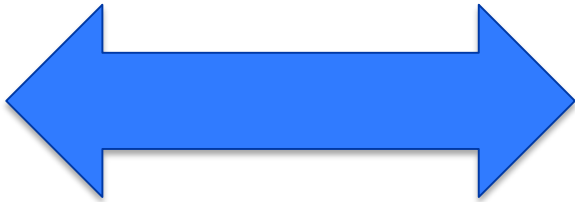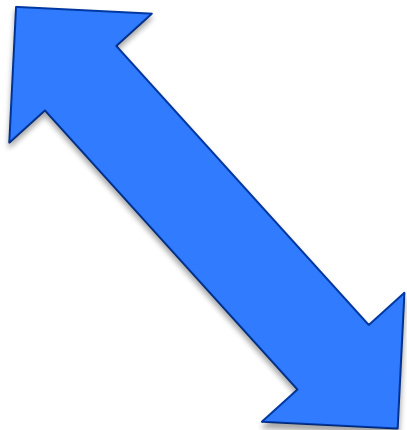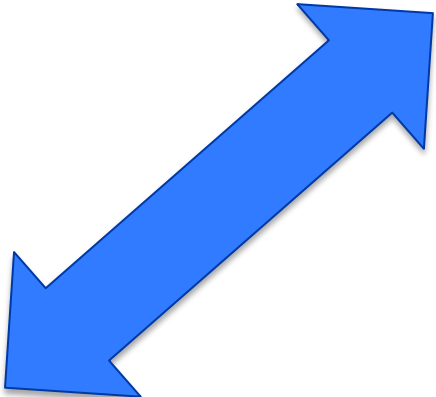
Planning

Guiding Question	Student Response
What is the purpose of the assignment?	
What is my goal?	

Reflecting

Guiding Question	Student Response
Did I reach my goal?	
Did I clearly present information	

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How do we support the development of self-regulation?

Self-efficacy, a person's beliefs about their capabilities, correlates strongly with achievement and is task specific.[2]
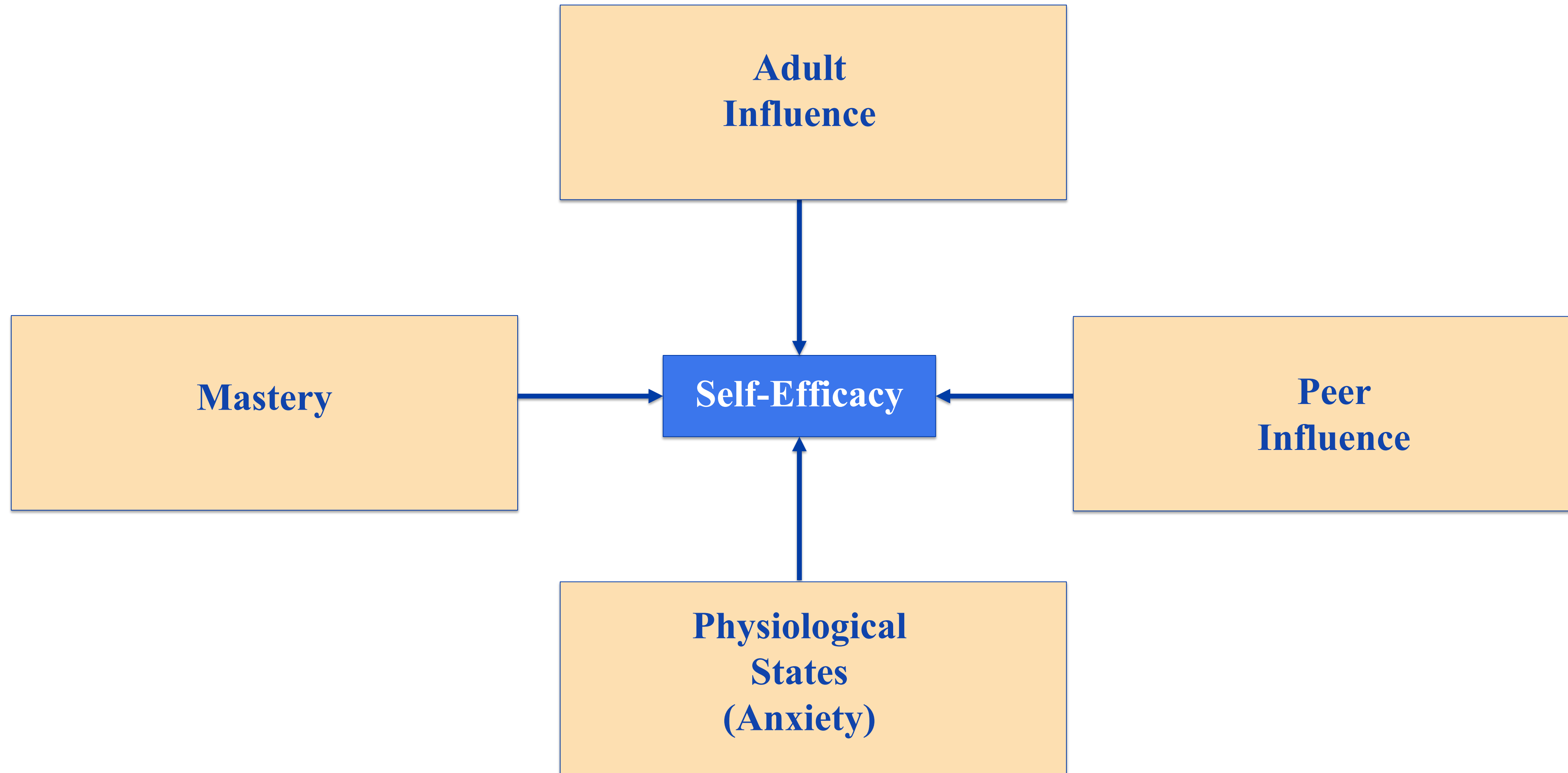
Calibration is a person's judgment about their performance as compared to a preset standard.

Students with weak calibration do not adjust strategies because they do not realize they are not meeting the requirements.[3]

Legacy High School's Flexible-Time Approach to Student Agency

Flex Mod

Personalized Scheduling

"Creating Your Legacy"

Legacy High School Model

Why?

- A focus on ***collaboration, communication, creativity, and critical thinking*** is essential to prepare students for increasingly complex life and work environments in the 21st century.

- Increased personalization and student choice.

How?

- Building design

- Flexible mod scheduling and flex-time

- Saber Centers

- Project-based learning

- 1:1 accessibility

Hallway View Through Garage Door

Saber Center

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Example Schedule: Freshman

Day	Mod 01	Mod 02	Mod 03	Mod 04	Mod 05	Mod 06	Mod 07	Mod 08	Mod 09	Mod 10	Mod 11	Mod 12	Mod 13	Mod 14	Mod 15	Mod 16	Mod 17	Mod 18	Mod 19	Mod 20	Mod 21	Mod 22
M	Spanish I FLA131.840012 Room: A011			Global Studies SST101.840023 Room: A212				Algebra I MAT111.840024 Room: B014			PE 9/Health PED111.840045 Room: D001-N				Physical Science SCI101.840076 Room: A201				Chamber Orchestra MUS413.840017 Room: F008			
T	English 9 ENG101.840021 Room: A111			Algebra I MAT111.840024 Room: B014							Physical Science (Lg Group) SCI101g.840012 Room: F101		PE 9/Health PED111.840045 Room: D001-N		Physical Science sCI101.840076 Room: A201							
W	English 9 ENG101.840021 Room: A111				Algebra I MAT111.840024 Room: B014				Global Studies SST101.840023 Room: A212						Art I ART111.841068 Room: E001				Chamber Orchestra MUS413.740017 Room: F008			
TH	Spanish I FLA131.840012 Room: A011				English 9 ENG101.840021 Room: A111				Guidance Freshman GEN100.841135 Room: A112				PE 9/Health PED111.840045 Room: D001-N		Physical Science SCI101.840076 Room: A201				Art I ART111.841068 Room: E001			
F	Spanish I FLA131.840012 Room: A011				Global Studies SST101.840023 Room: A212				Algebra I MAT111.840024 Room: B014				Global Studies (Lg Group) SST101g.84001 Room: F101		English 9 (Lg Group) ENG101g.840015 Room: F101		Chamber Orchestra MUS413.740017 Room: F008		Art I ART111.841068 Room: E001			

Example Schedule: Senior

Day	Mod 1	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7	Mod 8	Mod 9	Mod 10	Mod 11	Mod 12	Mod 13	Mod 14	Mod 15	Mod 16	Mod 17	Mod 18	Mod 19	Mod 20	Mod 21	Mod 22
M	AP Computer Principles C15301.840012 Room: E104				Wind Ensemple MUS401.840013 Room: F006			AP Chemistry SCI1521.840014 Room: B201				Speech ENG241.841045 Room: A114			AP Statistics MAT501.840025 Room: B205				AP Computer Science CIS501.840017 Room: E104			
T				AP Chemistry SCI1521.840014 Room: B201				Wind Ensemple MUS401.840013 Room: F006			AP Computer Principles C15301.840012 Room: E104	Speech ENG241.841045 Room: A114			AP Statistics MAT501.840025 Room: B205							
W					AP Chemistry SCI1521.840014 Room: B201			Wind Ensemple MUS401.840013 Room: F006		AP Statistics MAT501.840025 Room: B205										AP Computer Science CIS501.840017 Room: E104		
TH	AP Computer Principles C15301.840012 Room: E104								Speech ENG241.841045 Room: A114					AP Statistics MAT501.840025 Room: B205			AP Computer Science CIS501.840017 Room: E104					
F	AP Computer Principles C15301.840012 Room: E104				Wind Ensemble MUS401.840013 Room: F006			AP Chemistry SCI1521.840014 Room: B201									AP Computer Science CIS501.840017 Room: E104			Guidance Senior GEN400.844068 Room: A109		

Poll

What is your level of interest in adopting a flexible-time strategy like the system at Legacy High School?

      A. Already implementing a flexible-time system.

      B. Interested in adopting a flexible-time system.

      C. Not interested in adopting a flexible-time system.

      D. Don't know and/or need more information.

Findings From the *How Legacy High School Students Use Their Flexible Time* Study

Overview of the Legacy High School Flex-Time Study

- Legacy High School and REL Central partnership.

- Development of the student time log and study design.

- Examination of flex-time use by student subgroups.

Note. The study report, available [here](#), includes a version of the time log in an appendix.
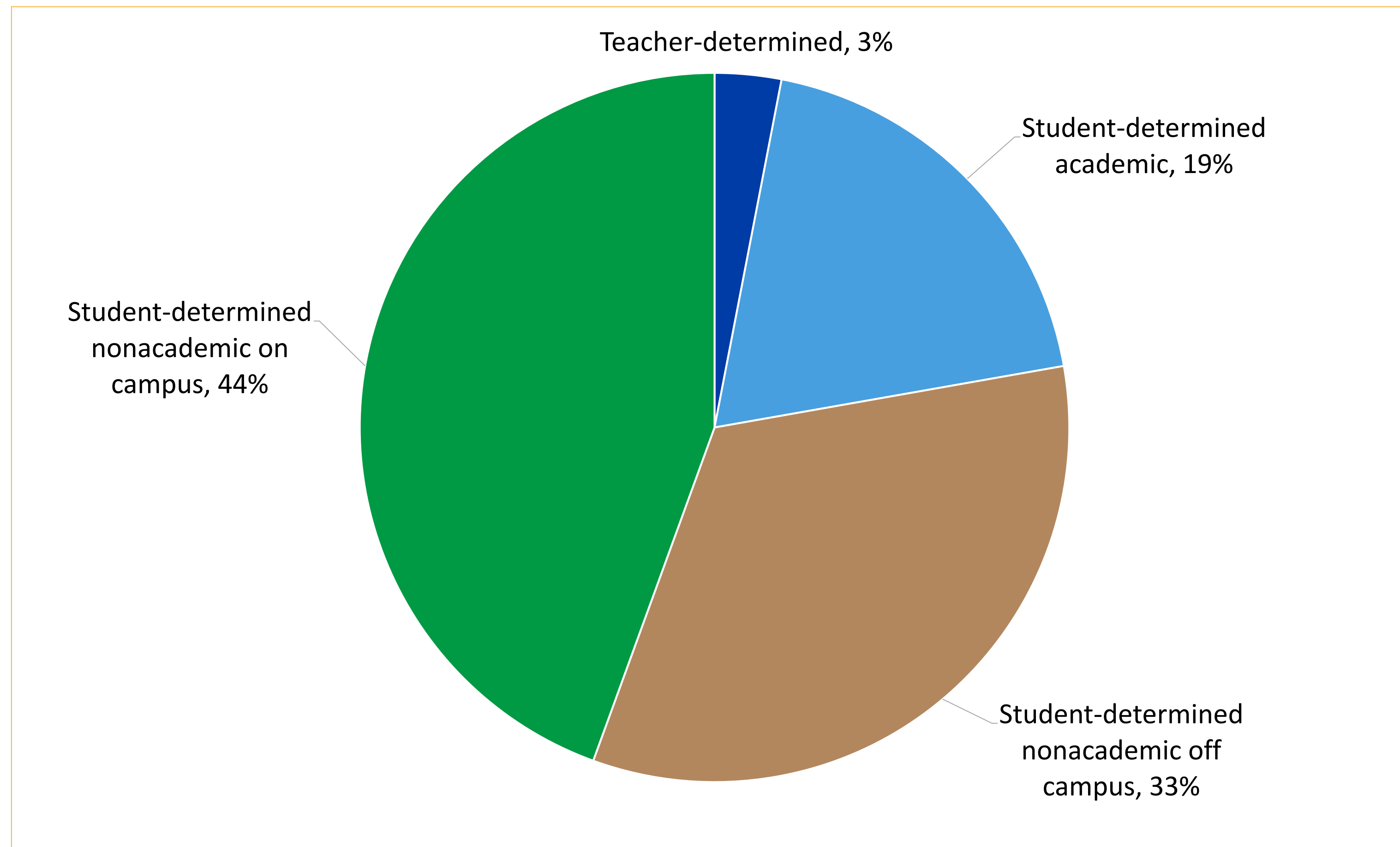
Student Time Log

- In the time log, students record how much flex-time they had that day.

- Students then record how much of their flex-time they spent on a variety of activities:

  – Student-determined versus teacher-determined flex-time.

  – Academic versus nonacademic flex-time.

  – Flex-time spent on nonacademic activities.

    - On campus versus off campus.

  – Flex-time spent on academic activities:

    - In a Saber Center, meeting with a teacher, working on coursework, practicing art/music, on extracurricular activities, seeking guidance/counseling, other.

  – Flex-time spent on academic subjects:

    - Math, science, English language arts, social studies, physical education, art/music, foreign languages, other.

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# Overview of the Published Report

- Published resources include:
  - 15-page full report
  - 4-page brief
  - 1-page snapshot
  - Infographic
  - Appendices
- Findings in the full report and appendixes are organized into three groups:
  - Results for all students
  - Results for student demographic groups
  - Results for students of different academic achievement levels

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Students Spent Most of Their Flex-Time Engaged in Nonacademic Activities on Campus

Teacher-determined, 3%

Student-determined academic, 19%

Student-determined nonacademic on campus, 44%

Student-determined nonacademic off campus, 33%
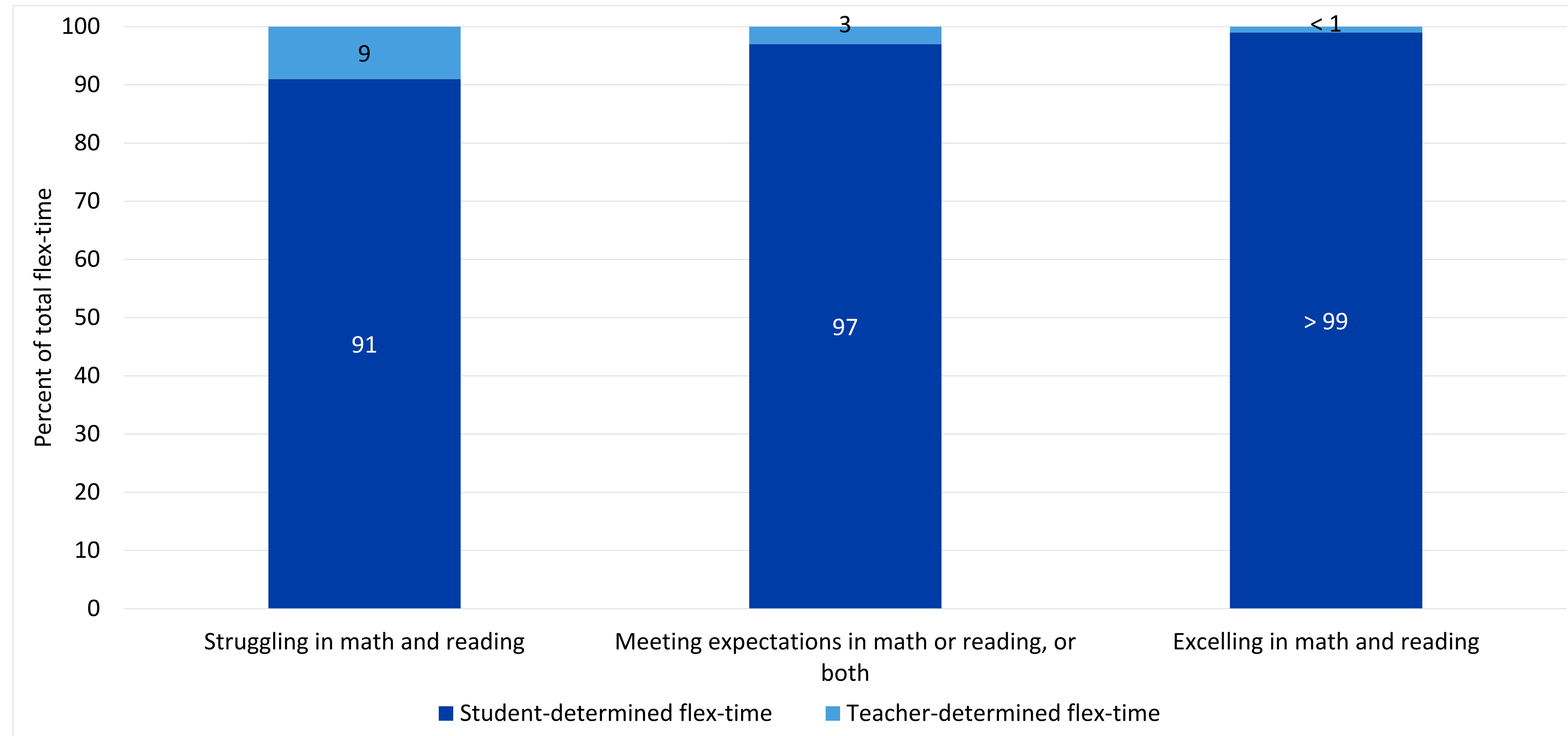
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The Majority of Students' Academic-Focused Flex-Time Was Spent Working on Coursework Outside of the Learning Centers
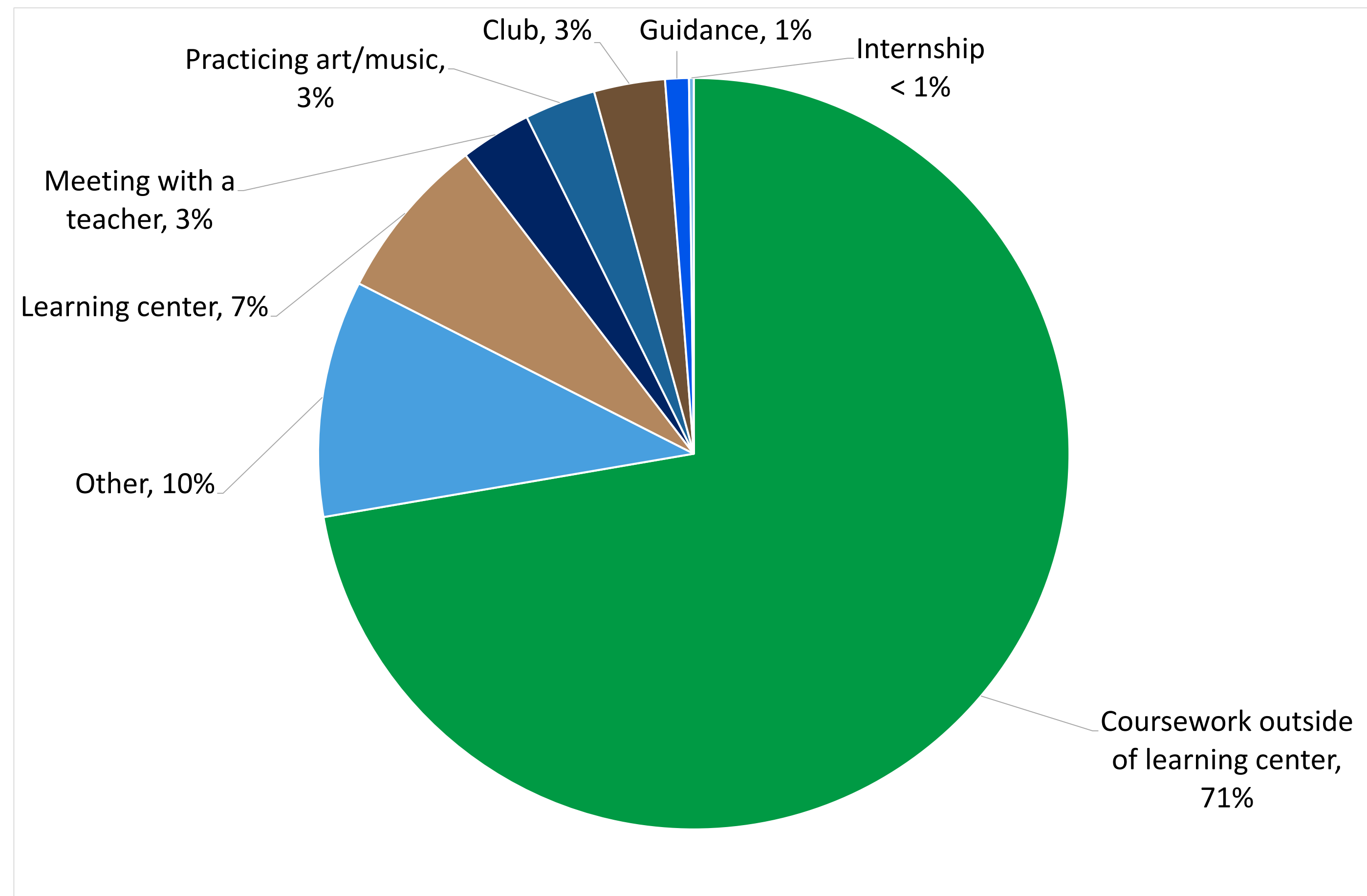
The Majority of Students' Teacher-Determined Time Was Spent in the Learning Centers

Percent of teacher-determined flex-time

Meeting with a teacher
12%

Learning center
42%

Other
28%

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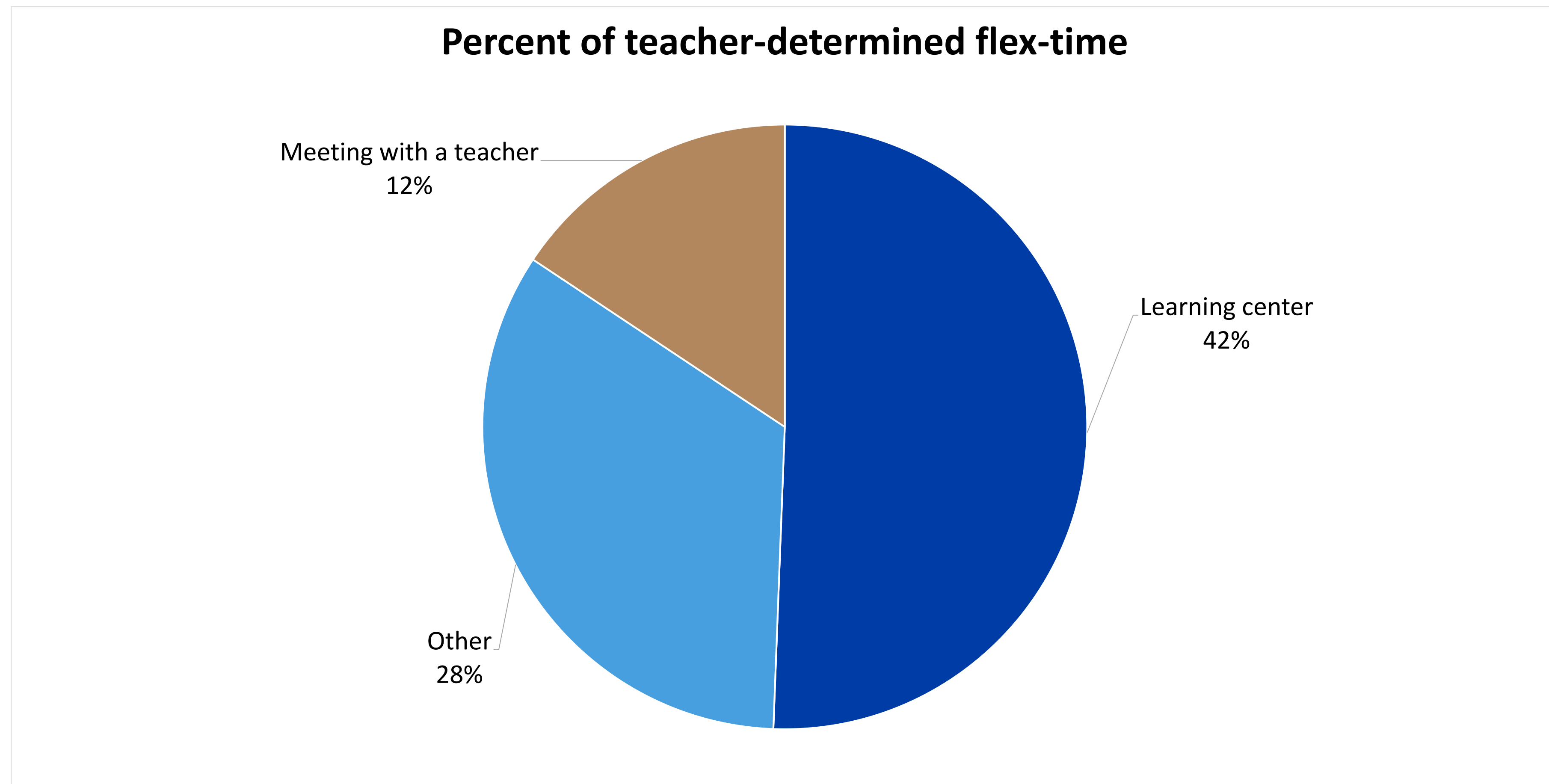
Students Who Were Struggling Academically Had More Teacher-Determined Flex-Time Than Other Students Did

Percent of total flex-time

Category	Student-determined	Teacher-determined
Struggling in math and reading	91	9
Meeting expectations in math or reading, or both	97	3
Excelling in math and reading	> 99	< 1

■ Student-determined flex-time   ■ Teacher-determined flex-time

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Struggling Students Spent More of Their Academic Flex-Time on "Other" Activities and Less Working on Coursework Outside of the Learning Centers


Y-axis: Percent of student-determined academic-focused flex-time

Outside the learning centers:
- Struggling in math and reading: 47
- Meeting expectations in math or reading, or both: 70
- Excelling in math and reading: 89

Other academic activities:
- Struggling in math and reading: 31
- Meeting expectations in math or reading, or both: 7
- Excelling in math and reading: 7

Legend:
- Struggling in math and reading
- Meeting expectations in math or reading, or both
- Excelling in math and reading

Applying Lessons Learned

Root Cause Analysis
- Stigma associated with Learning Center
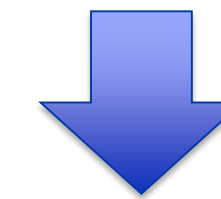- Learning Centers not meeting student needs
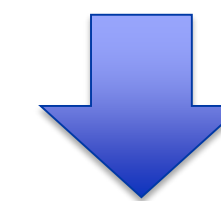- Lack of student agency
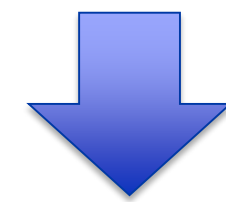
Plan-Do-Study-Act
- Improve consistency in how teachers use flexible time
- Market and promote flexible time
- Improve the efficacy of the Learning Centers

Humanities Center Reconceptualization

Explore root causes and gather additional data

Determine data-driven changes to the Humanities Center

Explore evidence-based practices to improve literacy, writing, and agency in the Humanities Center

Questions?

How can schools build self regulation skills in their students?

Highlights From Research [4]

"[S]tudents may need more support in using flex-time for personalized learning" (p. 12).

- There is some evidence that the interconnection of personalized learning and self-regulation is beneficial.

- School structures do not typically support students to develop student agency, particularly for secondary students.[5]
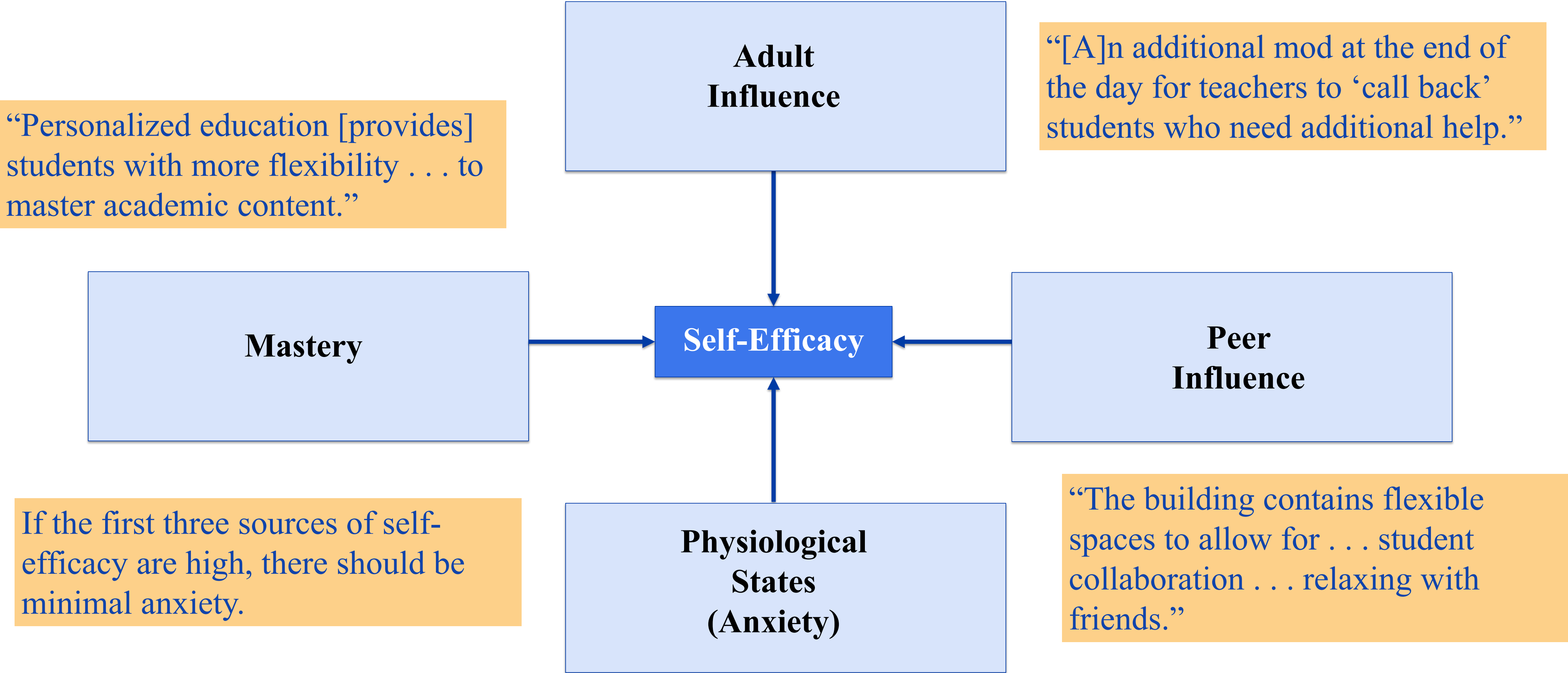
"[L]eaders . . . are considering training teachers to help all students develop self-regulated functioning and positive choice" (p. 12).

- Integration of self-regulation processes may lead to mastery and higher achievement.[6,7,8]
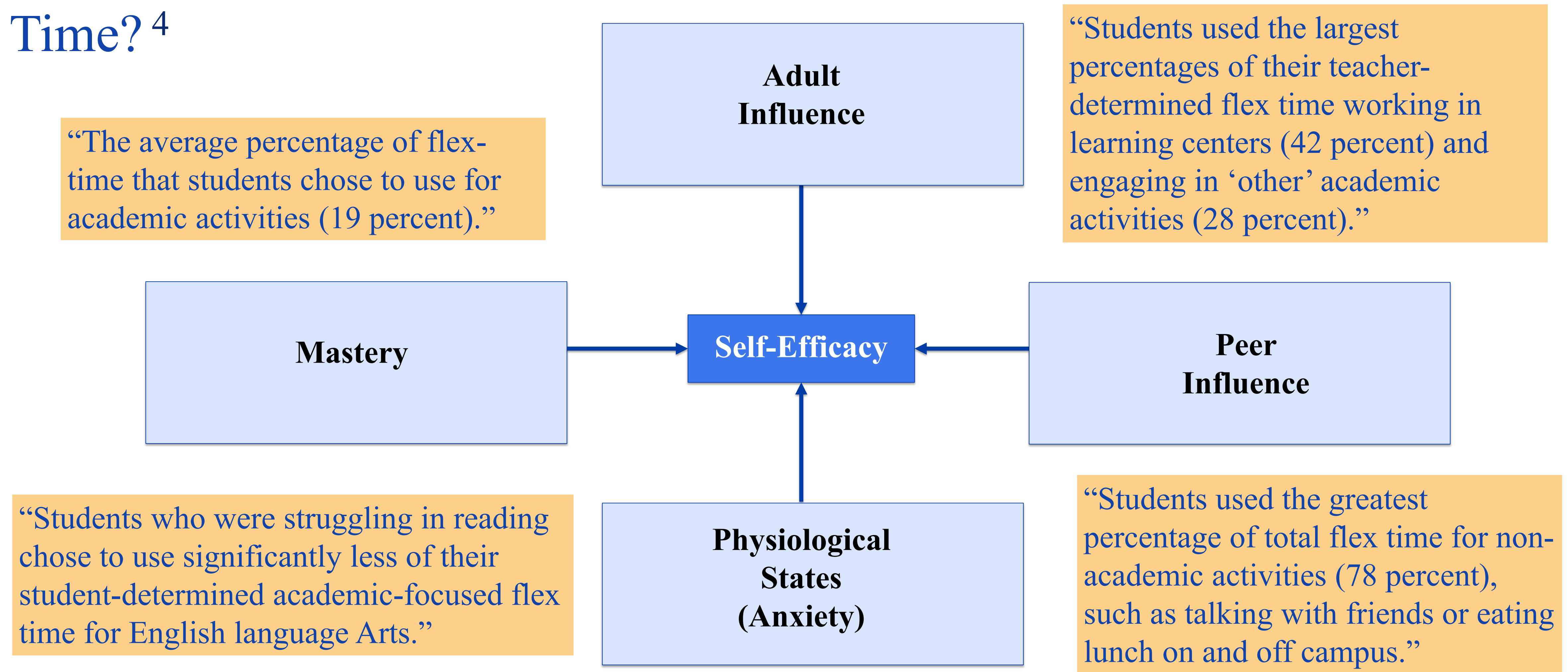
"Students who are struggling academically may benefit from targeted support" (p. 12).

- Students who received specific guidance on calibration as a self-regulatory improved in science performance, particularly in group settings.[3]

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How Does the Design of Legacy High School's Flexible-Time System Align With Research on Self-Efficacy to Promote Student Agency? [4]

Adult Influence

"[A]n additional mod at the end of the day for teachers to 'call back' students who need additional help."

"Personalized education [provides] students with more flexibility . . . to master academic content."

Mastery

Self-Efficacy

Peer Influence

If the first three sources of self-efficacy are high, there should be minimal anxiety.

Physiological States (Anxiety)

"The building contains flexible spaces to allow for . . . student collaboration . . . relaxing with friends."

What Do the Program Evaluation Outcomes Reveal About the Sources of Self-Efficacy and Student Agency at Legacy High School During Flex Time? [4]

Adult Influence

"Students used the largest percentages of their teacher-determined flex time working in learning centers (42 percent) and engaging in 'other' academic activities (28 percent)."

"The average percentage of flex-time that students chose to use for academic activities (19 percent)."

Mastery

Self-Efficacy

Peer Influence

"Students who were struggling in reading chose to use significantly less of their student-determined academic-focused flex time for English language Arts."

Physiological States (Anxiety)

"Students used the greatest percentage of total flex time for non-academic activities (78 percent), such as talking with friends or eating lunch on and off campus."

What Do the Program Evaluation Outcomes Reveal About the role of psychological states at Legacy High School During Flex Time? [4]
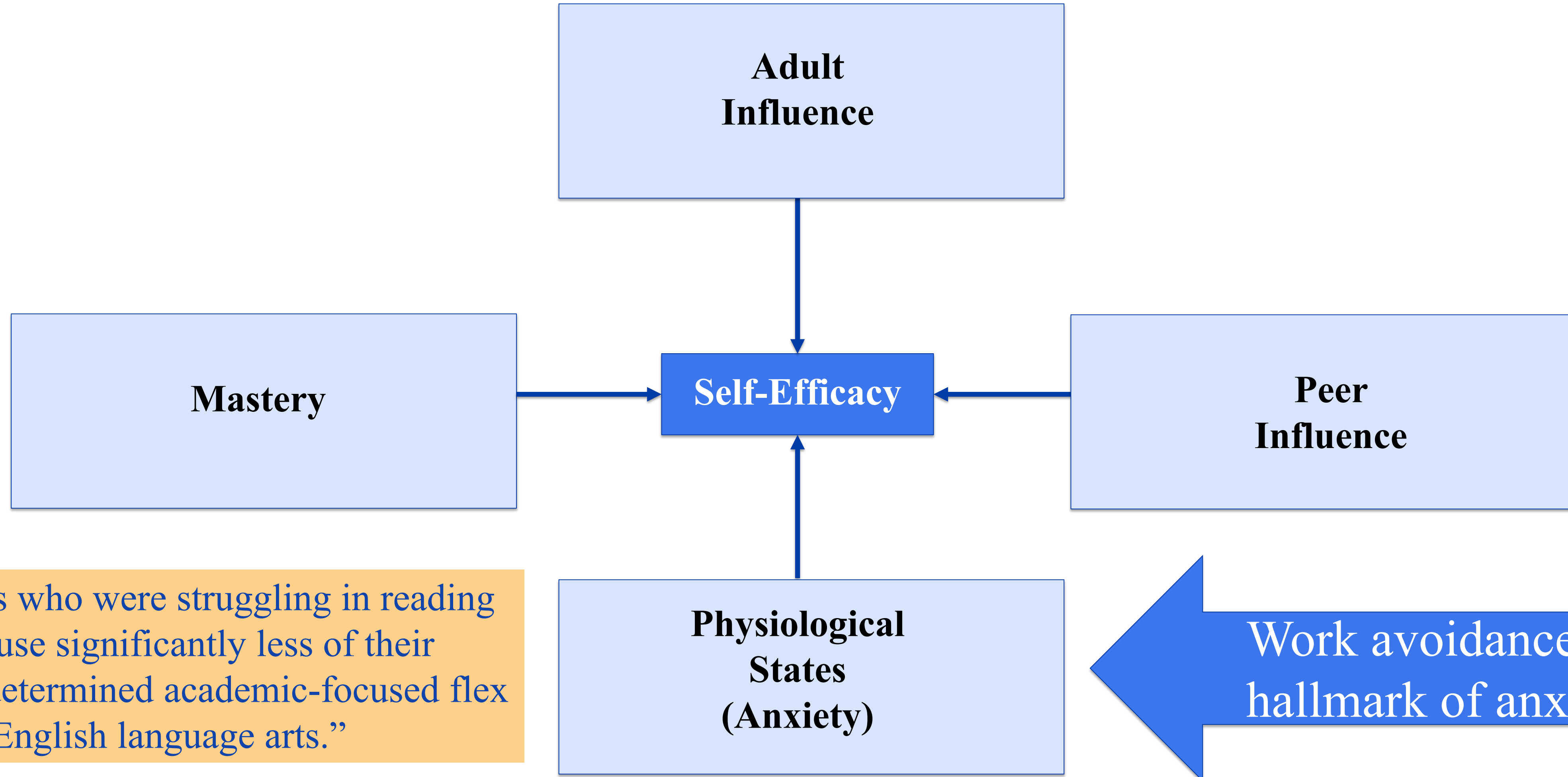
Adult Influence

Mastery

Self-Efficacy

Peer Influence

Physiological States (Anxiety)

"Students who were struggling in reading chose to use significantly less of their student-determined academic-focused flex time for English language arts."

Work avoidance is a hallmark of anxiety.

Some Questions to Ponder[4]

"When students used their student-determined flex-time for academic pursuits, they used the largest percentages doing coursework outside of learning centers and focused on math and science" (p. 4).
"The largest percentages of students' teacher-determined flex-time were used in learning centers and focused on math and science" (, p. 5).

Career Projections for North Dakota[9]

Do some students and teachers at Legacy High School place a high value on math and science?

If so, are these perceptions influenced by the projected job market? Associations with parents and adults in the community?

Associate's Degree	Bachelor's Degree	Master's, Doctoral, and Professional Degree
Computer User Support Specialists	General and Operations Managers	Lawyers
Preschool Teachers, Except Special Education	Registered Nurses	Educational Guidance, School, and Vocational Counselors
Civil Engineering Technicians	Accountants and Auditors	Physical Therapists
Paralegals and Legal Assistants	Elementary School Teachers, Except Special Education	Education Administrators, Elementary and Secondary School
Computer Network Support Specialists	Business Operations Specialists	Health Social Workers
Radiologic Technicians	Secondary School Teachers, Except Special and Career/Technical Education	-

Recommendations for Building Self-Efficacy

- All four sources of self-efficacy are key in building student agency. Students with strong self-motivational beliefs are able to self-regulate. These students can focus on refining strategies to improve overall mastery of learning.
- It is important to balance peer influence experiences and mastery experiences.
- There may be some anxiety for struggling students who would benefit from teacher support.
- It is critical to integrate self-regulation within classrooms and as part of flexible time.
- Teachers may need to model calibration strategies.
- It is beneficial to infuse self-regulatory processes into authentic, real-world activities.

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Some Questions to Ponder:

Can collective self-efficacy override individual student agency?

Individual student agency

Collective self-efficacy
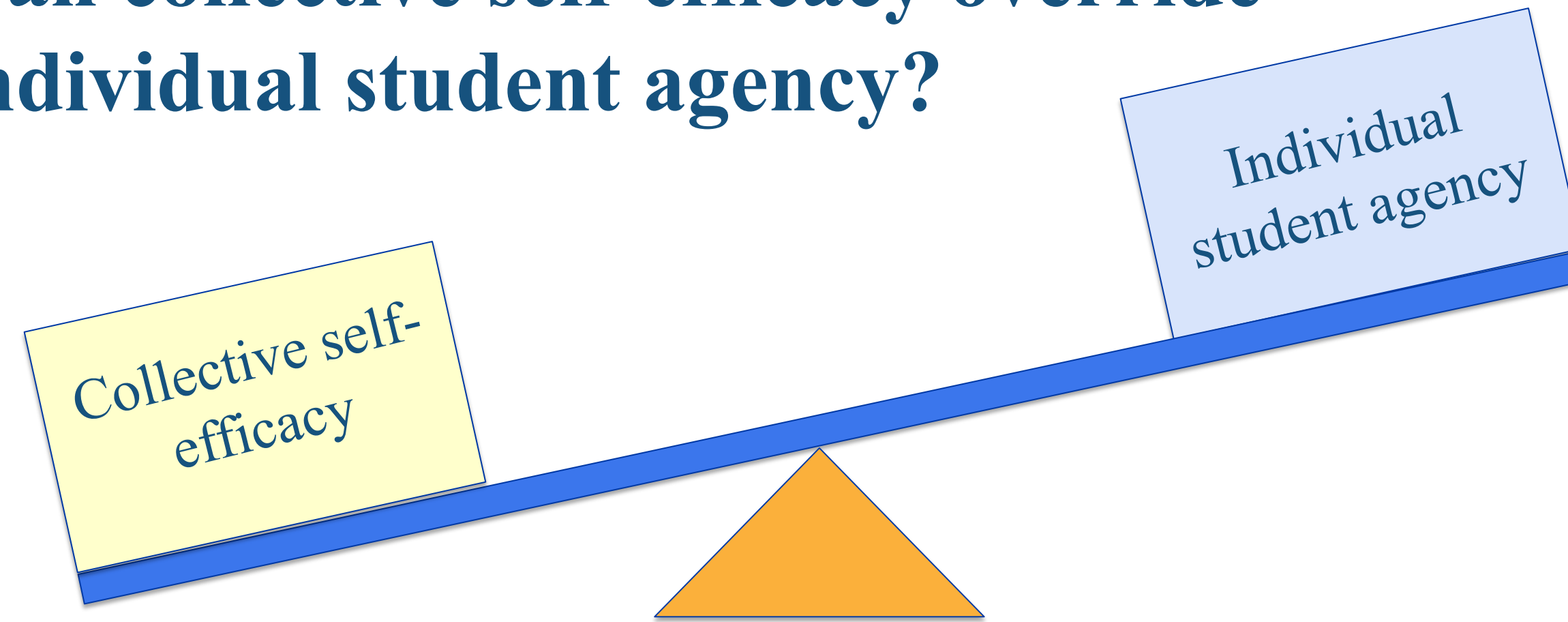
Sometimes students work collectively to underperform. Teachers have difficulty assessing what students know.

What is the impact of an imbalance between the role of the teacher and individual student responsibility?

Individual student agency

The role of the teacher
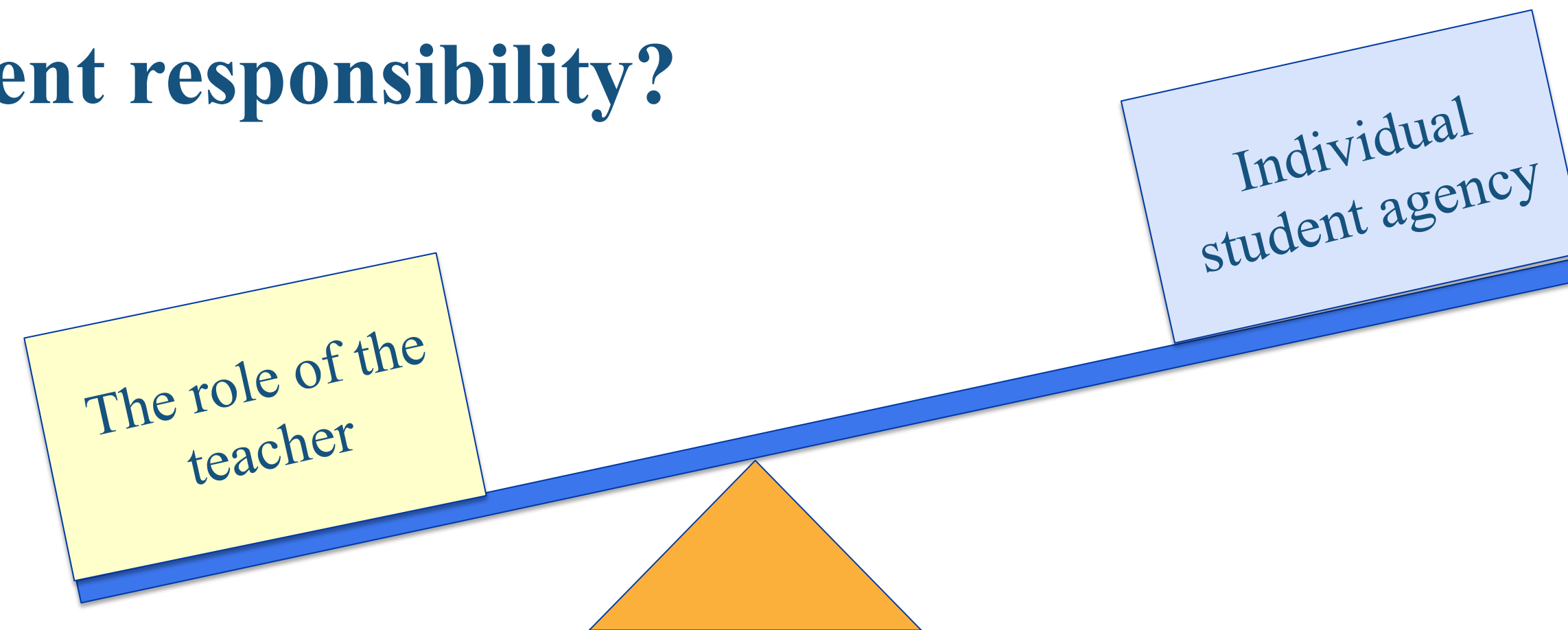
There should be a balance between the role of the teacher and student agency. Teacher support should coincide with student ownership for learning.

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Further Reading

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Questions?

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